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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/672,434	09/29/2003	Akihiro Koga	243396US2SRD	8505
22850	7590	09/21/2007		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314				
			EXAMINER JERABEK, KELLY L	
			ART UNIT 2622	PAPER NUMBER
			NOTIFICATION DATE 09/21/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/672,434	KOGA ET AL.	
	Examiner	Art Unit	
	Kelly L. Jerabek	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) 4, 5 and 7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 July 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 7/5/2007 have been fully considered but they are not persuasive.

Response to Remarks:

Applicant's arguments (Amendment pages 10-11) state that neither the Akiba reference nor the Tadao reference discloses "a stationary unit frame which is attached to stationary unit attaching portions by engaging with engagement sites provided at the stationary unit attaching portions, and extended in a predetermined direction". The Examiner respectfully disagrees. Akiba discloses a camera unit including stationary unit attaching portions disposed at positions surrounding the image pickup device region (fixed plate 17) and a stationary unit frame (stator frame 3, 3A) that is attached to stationary unit attaching portions and extended in a predetermined direction (figures 3A-3C, 4A-4C, 12A; page 5, paragraphs 88-94). Akiba states that the fixed plate (17) on which the CCD sensor (18) is mounted is directly fixed to the stator plate (3,3A) (page 15, paragraph 208; figures 4A, 12A). Thus, because the fixed plate (17) is mounted to the stator plate (3,3A) it is inherent that the camera unit includes stationary unit attaching portions surrounding the image pickup device region (plate 17 on which the

CCD sensor 18 is mounted) and that stationary unit frame (3,3A) is attached to the stationary unit attaching portions by engaging with engagement sites provided at the stationary unit attaching portions (the fixing of the plate 17 to the stationary unit frame 3A,3 illustrates this). The Examiner notes that the current claim language mentions “attaching portions” and “engagement sites” which the Examiner maintains are inherent in the fixing of the plate (17) to the stationary unit frame (3A,3).

Applicant's arguments (Amendment pages 10-11) state that neither the Akiba reference nor the Tadao reference discloses “the electrode region is engaged with an engagement site provided on the side of the stationary unit frame so as to be fixed inwardly thereof”. The Examiner respectfully disagrees. Akiba discloses a camera unit including an electrode region (12,14) that is fixed on an inner side of a stationary unit frame (3A, 3) (figures 3A-3C, 4A-4C, 12A). Akiba states that driving electrode region (12) is formed on the upper-inner surface of the stationary unit frame (3A, 3) and the holding electrode region (14) is formed on the lower-inner surface of the stationary unit frame (3A, 3) (page 5, paragraph 91; figures 3A-3C, 4A-4C; 12A). Thus, because the electrode regions (12,14) are formed on the inner surfaces of the stationary unit frame (3,3A) it is inherent that the electrode regions (12,14) are engaged with an engagement site provided on a side of the stationary unit frame (3A, 3) so as to be fixed inwardly. The Examiner notes that the current claim language mentions “engagement sites” which the Examiner maintains are inherent in the forming of electrode regions (12,14) on the stationary unit frame (3A,3).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akiba et al. US 2002/0036443 in view of Tadao JP 2001-069383.

Re claims 1 and 6, Akiba discloses a camera unit (endoscope) and a method of manufacturing a camera unit (page 4, paragraph 86) comprising: a substrate (glass plate 13,15) including at least an electrode region (12, 14) and an image pickup device region (17) (page 5, paragraphs 88-93; page 15, paragraphs 205-208; figures 3A-3C, 4A-4C, 12A); a driving electrode portion (12) disposed on the electrode region and including a plurality of electrodes arranged along a predetermined direction (page 5, paragraphs 88-93; figures 3A-3C, 4A-4C, 12A); an image pickup device (18 CCD) disposed on the image pickup device region (17) (page 15, paragraphs 205-208; figure 12A). Akiba's camera unit further includes stationary unit attaching portions disposed at positions surrounding the image pickup device region (fixed plate 17) and a stationary unit frame (stator frame 3, 3A) that is attached to stationary unit attaching portions and

extended in a predetermined direction (figures 3A-3C, 4A-4C, 12A; page 5, paragraphs 88-94). Akiba states that the fixed plate (17) on which the CCD sensor (18) is mounted is directly fixed to the stator plate (3,3A) (page 15, paragraph 208; figures 4A, 12A).

Thus, because the fixed plate (17) is mounted to the stator plate (3,3A) it is inherent that the camera unit includes stationary unit attaching portions surrounding the image pickup device region (plate 17 on which the CCD sensor 18 is mounted) and that stationary unit frame (3,3A) is attached to the stationary unit attaching portions by engaging with engagement sites provided at the stationary unit attaching portions (the fixing of the plate 17 to the stationary unit frame 3A,3 illustrates this). In addition, the camera unit includes movable units (2A, 2B) that are reciprocatingly driven in the stationary unit frame (stator frame 3A) in the predetermined direction by the driving electrode portion (12) and a support lens (6) respectively (page 5, paragraph 95-page 6, paragraph 102).

Akiba states that driving electrode region (12) is formed on the upper-inner surface of the stationary unit frame (3A, 3) and the holding electrode region (14) is formed on the lower-inner surface of the stationary unit frame (3A, 3) (page 5, paragraph 91; figures 3A-3C, 4A-4C; 12A). Thus, because the electrode regions (12,14) are formed on the inner surfaces of the stationary unit frame (3,3A) it is inherent that the electrode regions (12,14) are engaged with an engagement site provided on a side of the stationary unit frame (3A, 3) so as to be fixed inwardly. Additionally, the image pickup device region (17,18) is fixed on an end surface of the stationary unit frame (3A) toward the movable units (2A, 2B) (figures 3A-3C, 4A-4C, 12A). However, although the Akiba reference discloses all of the above limitations it fails to specifically disclose a flexible substrate

that includes an electrode region and an image pickup device region formed on a same surface wherein the flexible substrate is bent along a bending portion between the electrode region and the image pickup device region.

Tadao discloses a camera unit comprising a flexible substrate with flexibility in which a function print board (2-4) having an electrical function and an imaging device print board (6) are connected via a flexible print wiring board (8) provided on the same surface side, wherein the function print board (2-4) is fixed to the side surface of the stator frame (10) in the state where it faces the lens side (10a) (figure 5, paragraphs 22-26). Therefore it would have been obvious for one skilled in the art to have been motivated to connect the substrate provided with an electrode region and the substrate with an imaging device region disclosed by Akiba with a flexible print wiring board as disclosed by Tadao so that the substrate provided with the electrode region and the imaging device region are provided on the same surface side. Doing so would provide a means for reducing the size of the camera and thus providing a more compact camera.

Re claim 2, Tadao further states that the flexible substrate (2-4, 6, 8) further comprises an electrode part mounting region (2-4) disposed adjacent to the image pickup device region (6) and bent along a bending portion (8) between the image pickup device region (6) and the electrode part mounting region (2-4), and the electrode part mounting region (2-4) is fixed on a side of the stationary unit frame (10) inwardly thereof (figure 5, paragraphs 22-26).

Re claim 3, Tadao states that the flexible substrate (2-4, 6) includes printed circuit boards that are cutoff at a bending portion (8) (figure 5). Tadao fails to specifically state that the printed circuit boards include a resin sheet and metal leads. However, the Examiner takes **Official Notice** that it is well known for printed circuit boards comprise a resin sheet and metal leads. Therefore, it would have been obvious for one skilled in the art to have been motivated to include printed circuit boards that are composed of a resin sheet and metal leads. Doing so would provide a means for protecting fragile circuit elements.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Contacts

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kelly L. Jerabek whose telephone number is **(571) 272-7312**. The examiner can normally be reached on Monday - Friday (8:00 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on **(571) 272-7372**. The fax phone number for submitting all Official communications is **(571) 273-7300**. The fax phone number for submitting informal communications such as drafts, proposed amendments, etc., may be faxed directly to the Examiner at **(571) 273-7312**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KLJ



TUAN HO
PRIMARY EXAMINER